

LUKANTSEVER, Yu.L.; ZAITOV, F.N.

Thermal activation of the process of current carrier trapping
in crystal phosphors. Uch. zap. Osh. gos. ped. inst. no. 5:
15-23 '63. (MIRA 18:2)

L 6416-66 EWT(1)/T LJP(c) G3

ACC NR: AP5027408

SOURCE CODE: UR/0181/65/007/011/3307/3309

AUTHOR: ^{44,55}Sidiyarenko, V. I.; ^{44,55}Zaitov, F. M.; ^{44,55}Lukantsever, Yu. L.

ORG: ^{44,55}Osh State Teachers' Institute (Oshskiy gosudarstvennyy pedagogicheskiy insti-
tut)

TITLE: Effect of some structural factors on the thermal stability of color centers
in alkali halide phosphor crystals

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, 3302-3309

TOPIC TAGS: alkali halide, sodium chloride, ^{21,44,55}crystal phosphor, color center

ABSTRACT: The authors study the following factors with regard to their effect on the thermal stability of F-centers in NaCl-based phosphor crystals: 1. impurity ions (presence or absence, effect of ion individuality); 2. variation in the concentration of a given type of impurity ion; 3. plastic deformation; 4. previous thermal and radiation treatment; 5. preheating of the activated crystal. The results are tabulated for NaCl phosphors activated by thallium, calcium, silver, strontium and cadmium. Some of the characteristics of thermal dissolution of color centers in

Card 1/2

0701203

L 6416-66

ACC NR: AP5027408

3

these phosphors are experimentally determined. A theoretical expression is derived and analyzed for the rate of dissolution of color centers assuming that a considerable part in the mechanism of thermal dissolution is played by ion processes. The various factors which may change the thermal stability of color centers are discussed. Theoretical predictions are made on the basis of the ion mechanism of color dissolution. The theoretical and experimental data show that the ion mechanism may be useful in explaining the thermal dissolution of color centers in alkali halide phosphor crystals. The authors are grateful to N.Y.L. Fukanishev for plotting the theoretical curves. Orig. art. has: 1 figure, 6 tables, 4 formulas.

SUB CODE: SS/ SUBM DATE: 15Mar65/ ORIG REF: 016/ OTH REF: 006

Card 2/2

CHERNENKO, V.P.; LUKANTSEVER, Yu.I.; ZAUTOV, F.N.

Mechanism underlying the breakdown of color centers and the extinction of recombination luminescence in the NaCl - Cd crystal phosphor. Izv. vys. ucheb. zav.; fiz. 8 no.1:89-93 '65.

(MIRA 18:3)

1. Omskiy pedagogicheskiy institut.

LUKANTSEVER, Yu.L.; ZAITOV, F.N.; CHERNENKO, V.P.

Detailed study of the mechanism underlying recombination
luminescence of the NaCl - Ag crystal phosphor. Izv. AN
SSSR Ser. fiz. 29 no.1:54-58 Ja '65.

(MIRA 18:2)

1. Oshskiy gosudarstvennyy pedagogicheskiy institut, KirgSSR.

L 1557-66 ENT(1)/E IJP(c)

ACC NR: AP6002080

SOURCE CODE: UR/0139/65/000/006/0043/0047

AUTHORS: Chernenko, V. P.; Zaitov, F. N.; Lukantseva, Yu. L. 43

ORG: Osha State Pedagogical Institute (Oshskiy gospedinstitut) 21,44,55

TITLE: Investigation of the mechanism of destruction of color centers and recombination luminescence of NaCl-Ag, Ca crystal phosphor. II. 21,44,55

SOURCE: Izv. Fizika, no. 6, 1965, 43-47

TOPIC TAGS: luminescence spectrum, color center, recombination luminescence, x ray irradiation, crystal phosphor, absorption spectrum

ABSTRACT: The first part of the article was published in Izv. vuzov SSSR, Fizika, no. 5, 97, 1965, and dealt with the integral thermal deexcitation, thermal discoloring, and the luminescence spectra of NaCl-Ag irradiated with x rays. The present investigation was made on a more complicated single-crystal phosphor NaCl-Ag (0.1 mol.%) Ca (0.3 mol.%), grown from the melt by the Kiropoulos method. The

Card 1/2

L 15547-66

ACC NR: AP6002080

Investigations were made at 290 -- 600K and the excitation was by means of copper radiation (15 ma, 45 kv, 30 minute exposure). The absorption spectra, the deexcitation and the discoloration curves, and the photostimulated and thermostimulated luminescence spectra were measured with the same apparatus as before. The heating rate of the phosphor was constant in all cases at 0.3°/sec. The results confirm the earlier data concerning the two-stage mechanism of luminescence excitation, consisting of destruction of the color centers followed by recombination of the carriers. The addition of the calcium gives rise to the formulation of several luminescence centers, each characterized by a different number of emitted quanta and different radiation efficiency. This causes different degrees of intensification of the luminescence peaks and a complicated structure of the individual peaks. Orig. art. has: 4 figures and 3 tables.

SUB CODE: 20/ SUBM DATE: 17Jun63/ ORIG REF: 013/ OTH REF: 006

Card

2/2

1 32790-66 GP-2
ACC NR: AP6011555 SOURCE CODE: UR/0051/66/020/003/0450/0452
AUTHORS: Dudarev, Ye. S.; Zaitov, F. N.; Lukantsever, Yu. L. 13
ORG: none
TITLE: Concerning the ionic mechanism of photometric disintegration of F centers in alkali halide crystal phosphors, *photometry*
SOURCE: Optika i spektroskopiya, v. 20, no. 3, 1966, 450-452
TOPIC TAGS: alkali halide, crystal phosphor, color center, recombination emission, ionization, relaxation process
ABSTRACT: The authors take exception to the prevailing opinion that the dependence of thermal and photometric stability of F centers is due to creation of new types of localization and recombination centers, which compete with the F centers in the capture of electrons. Experimental data on the factors that lead to destruction of color centers are more complicated than merely direct ionization of these centers, so that the conditions under which the phosphor is prepared, the presence of extraneous impurities in the crystal, the prior his-
Card 1/2 UDC: 535.373.1:535.21.096

I. 39790-66
ACC NR: AP6011555

tory of the sample, the form and temperature of excitation, and other factors influencing the stability are affected by the interaction between the ions that destroy the color centers and the color centers excited by the light. Using the results of an earlier paper on the subject (Mezhvuzovskiy sbornik nauchnykh rabot, seriya fiz.-mat. [Inter-University Collection of Scientific Papers, Physical-Mathematical Series], Frunze), they obtain an expression for the rate of change of thermal ionic destruction of color centers and from it a theoretical photothermal discoloring of F centers in NaCl-Ag phosphors. Certain numerical characteristics of these phosphors are obtained on the basis of the results. It is concluded that the influence of different factors on the stability of F centers can be satisfactorily explained from the point of view of the ionic mechanism of relaxation processes in alkali halide crystal phosphors. Orig. art. has: 6 formulas.

SUB CODE: 20/ SUBM DATE: 01Jul64/ ORIG REF: 010/ OTH REF: 001

Card

2/2

11111. Concerning the thermal activation of the process of capture of charge carriers in crystal phosphors.

11111. SOURCE: Uch. zap. Oshsk. gos. ped. in-t., vyr. 5, 1963, 15-23.

TRANSLATION: The curves of fluorescence quenching, thermal de-excitation, and

Card 1/2

Card 2/2

CHERNENKO, V.P.; ZAITOV, F.N.; LUKANTSEVER, Yu.L.

Characteristics of the light sum storage in KCL - Tl,Ca crystal phosphor.
Izv. vys. ucheb. zav.; fiz. no.6:34-36 '63. (MIRA 17:2)

1. Oshskiy gosudarstvennyy pedagogicheskiy institut Kirgizskoy SSR.

ACCESSION NR: AP4025034

S/0139/63/000/006/0034/0036

AUTHORS: Chernenko, V. P.; Zaitov, F. N.; Lukantsever, Yu. L.

TITLE: On the characteristic of light-sum storage in KCl-Tl, Ca-crystal phosphors

SOURCE: IVUZ. Fizika, No. 6, 1963, 34-36, and insert facing page 36

TOPIC TAGS: light-sum storage, phosphor, x-irradiation, thermoluminescence, luminescence intensity

ABSTRACT: The light-sum storage characteristic of single crystal KCl-Tl (0.1 mol%) Ca (0.5 mol%) phosphors has been investigated after x-irradiation in the x-ray instrument URS-55a (tube BSV-2, Cu; V- 45 kv, I - 15 ma) for a 30- to 90-min duration. The thermoluminescence curves were recorded by means of EPP-09 potentiometer with an FEO-20 amplifier for 30-, 45-, 60-min irradiation duration and one curve after a 17-hour pause. After each excitation-measurement cycle the thermoluminescence curves show a new change in the light-sum magnitude. It is believed that this effect follows from a process leading to actual lowering of luminescence intensity after repeated irradiation followed by an actual increase in luminescence intensity when the crystal undergoes a relaxation. "The authors wish to thank Yu. N. Yevstifeyev and V. Ye. Chudakov for their help." Orig. art. has: 1 figure.

Card 1/1 ASSOCIATION: Oshskiy gospedinstitut, Kirghiz SSR(Osh State Teachers Institute)

SIDLYARENKO, V.I.; ZAITOV, F.N.; LUKANTSEVER, Yu.L.

Thermal stability of F-centers in KCl - Tl, Sr and KCl - Tl, Ca
crystal phosphors. Izv. vys. ucheb. zav.; fiz. no. 5: 50-54, '63.

(MIRA 16:12)

1. Oshskiy gosudarstvennyy pedagogicheskiy institut.

CHERNENKO, V.P.; ZAITOV, F.N.; LUKANTSEV, Yu.L.

Mechanism underlying the recombination luminescence of the
crystal phosphor NaCl-Ag. Opt. i spektr. 15 no.1:83-88 J1. '63.
(MIRA 16:8)

(Phosphors)

ZAITOV, F. N.; LUKANTSEVER, Yu. L.

Thermal discoloration of F-color centers in alkali metal halide
crystals under optical conditions. Izv. vys. uch. zav.; fiz. 3:
45-48 '62. (MIRA 15:10)

1. Oshskiy gosudarstvennyy institut Kirgizskoy SSR.

(Color centers)

(Alkali metal halide crystals—Thermal properties)

SIDLYARENKO, V.I.; LUKANTSEVER, Yu.L.; ZAITOV, F.N.

Distribution of F-centers in alkali halide crystal phosphors. Izv. vys.
ucheb.zav.; fiz.no.2:42-45 '69.

(MIRA 16:5)

1. Oshskiy gosudarstvennyy pedagogicheskiy institut Kirgizskoy SSR.
(Color centers) (Alkali metal halide crystals)

L 13100-63

EWI(1)/BDS AFFTC/ASD/3SD

ACCESSION NR. AP2603414

S/0051/63/016/001/0033/0012

AUTHOR: Chernenko, V.P., Zaitov, F.A., Lukantseva, Yu.L.

TITLE: Investigation of the mechanism of recombination luminescence of NaCl:Ag crystal phosphor

SOURCE: Optika i spektroskopiya, v.15, no.1, 1963, 83-88

TOPIC TAGS: luminescence, glow curve, color center, luminescence center, NaCl(Ag)

ABSTRACT: The authors carried out a comprehensive investigation of the recombination luminescence of NaCl:Ag (0.1 mole percent Ag); the studies included recording of integral glow curves, investigating the spectral composition of the thermostimulated luminescence, and the spectral composition of the photostimulated luminescence. The spectra were recorded by means of an SF-4 spectrophotometer coupled to an FEU-29 photomultiplier connected via a dc amplifier to a loop oscillograph; the scanning rate from 2 to 6 eV was usually 20 sec. The spectra were corrected for the spectral sensitivity of the photomultiplier and the dispersion of the monochromator. In addition, the excitation and emission spectra were corrected for nonlinearity of the scan as regards intensity. The crystals were grown from a melt, some crystals were x-irradiated. Glow curves

Card 1/2

L 13100-63

ACCESSION NR: AP3003414

2'
and spectra at different stages of thermostimulation and bleaching are reproduced. The experimental data are analyzed and discussed. The data allow of determining the contribution of different centers to the appearance of the glow peaks. For the different glow peaks, it would appear that electrons released from the different centers participate in each of the observed glow peaks. The thermoluminescence spectra of NaCl:Ag change in the process of relaxation. At different stages of the relaxation process different centers may play the role of traps and/or luminescence centers. "In conclusion, the authors express their deep gratitude to Yu.N.Yavstifayev and V.Ye.Chudenzov for assistance in performing the experiments." Org.art.has: 2 formulas and 5 figures

ASSOCIATION: none

SUBMITTED: 12Sept62

DATE ACQ: 30Jul63

ENCL: (0)

SUB CODE: PH

NO REF SOV: 010

OTHER: 004

Card 2/2

S/058/62/000/008/037/134
A061/A101

AUTHOR: Zaitov, F. N.

TITLE: On the stability of F color centers in alkali halide crystal phosphors

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 27, abstract Bv184
("Tr. In-ta fiz. i astron..AN EstSSR, 1961, no. 15, 138 - 148; summary in English)

TEXT: The effect of impurity ions and plastic deformation on the optical and thermal stability of F centers in alkali halide crystals is investigated. The part played by ionic processes in F center thermal destruction is discussed. ✓

[Abstracter's note: Complete translation]

Card 1/1

247500

AUTHORS:

TITLE:

PERIODICAL:

Zaitov, F.N., Lukantsever, Yu.L.

On the thermal decoloration of F-colour centres for alkali halide crystals in the optical region

Izvestiya vysshikh uchebnykh zavedeniy. Fizika, no.3, 1962, 45-48

TEXT: Results on the destruction of F-colour centres in single crystals of NaCl in the optical and thermal regions are compared. Crystals were excited in an X-ray beam for 30 minutes. Thermal decoloration was produced by heating from ~ 270 to 450°K at a rate of 0.15°K/sec . Comparison of the curves obtained in the thermal and optical regimes show that at 355°K in the thermal regime 15% of all the F-centres are destroyed whereas in the optical regime about 95% are destroyed. Results are also given for the intermediate region between the optical and thermal decoloration curves were obtained instead of the usual two stage ones. By the use of these curves the kinetics of the destruction of F-centres was investigated. The effect of the intensity of

On the thermal decoloration ...

39036
S/139/62/000/003/006/021
E039/E420

excitation light is discussed and compared with theory. The second stage in the thermal decoloration curve coincides with the corresponding position on the thermal decoloration of M-absorption bands and the luminescence peak corresponding to the destruction of M-centres in NaCl crystals. The effect of the presence of M-centres on the destruction of F-centres is discussed in detail. There are 2 figures.

ASSOCIATION: Oshskiy gospedinstitut Kirgizskoy SSR
(Osh State Pedagogical Institute of the Kirgiz SSR)

SUBMITTED: March 10, 1961

Card 2/2

22164

S/048/61/025/004/013/048
B104/B201

24,3500

AUTHORS:

Lukantsever, Yu. L. and Zaitov, F. N.

TITLE:

Possibility of the thermal activation of the trapping of charge carriers in crystal phosphors

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 4, 1961, 473-476

TEXT: The present paper has been read at the 9th Conference on Luminescence (Crystal Phosphors), Kiyev, June 20-25, 1960. Results are presented relative to studies that indicate the possibility of a thermal activation of the trapping of charge carriers. The experiments were performed on

ZnS-Cu (10^{-4} g/g), non-activated NaCl, NaCl-Ca (0.5 mole%), and KCl-Ca, Ag phosphors. The investigation comprised thermal de-excitation, analyses of the damping curves near and in the range of thermal extinction of luminescence were made; furthermore, the thermal decoloration and the spectra of excited absorption were studied. Concerning the ZnS-Cu phosphor it was possible to show that the light sums recorded in each of the

Card 1/3

22164

S/048/61/025/004/013/048
B104/B201

Possibility of the...

three groups of electron localization levels change nonmonotonically with changes of temperature. The ratio $\gamma = A_0/A_r$ as a function of temperature was shown to pass through a maximum. A_0 is the trapping probability, A_r the recombination probability. $\gamma = \gamma(T)$ rises up to extinction, whereupon it drops to zero. The behavior of γ can be explained by considering the necessity of a thermal activation for the localization of electrons. Under

these premises, γ can be represented by $\gamma = A_0/(A_r^r + A_r^{rl}) = \gamma_0/(1 + Ce^{-\Omega/kT})$. Here, A_r^r and A_r^{rl} denote the probabilities for radiative and radiationless recombinations, respectively, Ω is the activation energy for a radiationless recombination, γ_0 and C are constants. It is further assumed that

$A_0 = fe^{-\Delta/kT}$, Δ being the activation energy for electron trapping at adhesion levels. γ is shown to pass through a maximum if $\Delta < \Omega$. The mechanism of the destruction of color centers by ions in alkali halide phosphors is discussed next: A punctiform microdefect is formed in a given lattice site. The probability for such microdefects to be liberated is $P_v = P_{ov} \exp(-Q_v/kT)$, where Q_v denotes the activation energy. These punctiform microdefects interact with the F centers and destroy them, or

Card 2/3

22164

Possibility of the...

S/048/61/025/004/013/048
B104/B201

the microdefects interact with the dislocations and are "trapped" by them.
Approximation equation

$$-dn_F/dt = P_{0V} \frac{n_V}{\gamma_0 N} n_F \exp(-(Q_p + Q_V - Q_0)/kT)$$

is obtained, where n_F denotes the number of F centers, n the number of sites at which the formation of free microdefects is possible, Q_p is the activation energy for the trapping of a microdefect by an F center, and Q_0 the activation energy for the trapping by a dislocation. The factor in this equation depends upon the production conditions, and may take unusual high values exceeding the oscillation frequency of the ions. In the ensuing discussion, Ch. B. Lushchik made a brief report of results obtained at Tartu, and stated that values observed for the abovementioned factor amounted to as much as 10^{22} sec^{-1} . Adirovich, F. I. Vergunas, and F. N. Zaitcy are mentioned. There are 1 figure and 12 references: 11 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: Ref. 4: Randall D. T., Wilkins, M. H. F., Proc. Roy. Soc. A., 184, 366 (1945).

Card 3/3

ZAITOV, P. N. Cand Phys-Math Sci -- (diss) "Study of the centers of capture and anisothermal relaxation processes in alkali-haloid crystallophori."

Tartu, 1957. 13 pp (Tartu State Univ), 100 copies. Bibliography: p. 13

(13 titles) (KL, 13-58, 02)

L 29344-66 EWP(1)/ENT(m) RM

ACC NR: AP6018592

SOURCE CODE: UR/0379/66/002/002/0204/0212

AUTHOR: Zaikov, G. Ye.; Kazancheva, S..D.; Mayzus, Z. K.

23
E

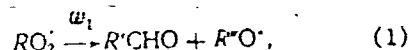
ORG: Institute of Chemical Physics, AN SSSR, Moscow (Institut khimicheskoy fiziki
Akad. Nauk SSSR)

TITLE: Effect of water on the rate and course of oxidation of organic substances

SOURCE: Teoreticheskaya i eksperimental'naya khimiya, v. 2, no. 2, 1966, 204-212

TOPIC TAGS: chemical reaction kinetics, oxidation reaction, reaction rate, methyl ethyl ketone, free radical reaction, oxidation kinetics

ABSTRACT: A study was made of the effect of water as a polar solvent with a high dielectric constant on the kinetics of free radical reactions in the oxidation of polar organic compounds such as methyl ethyl ketone. Earlier, the authors established that a nonpolar solvent (benzene) contributed to an increase in the relative yield of the products of peroxide radical decomposition:



where R' and R'' are radicals containing fewer C atoms than the R radical. A polar

Card 1/2



~~ZAITOV, I.R.~~

Organizing the Soviet Society of Photogrammetry brief
summary of the report. Trudy Lab.aeromet. 7:327-328 '59.
(MIRA 13:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Photogrammetry--Societies)

ZAITOV, I. P.

BOBIR, Nikolay Yakovlevich; *ZAITOV, I. P.*, redaktor; KHRONCHENKO, F.I.,
redaktor izdatel'stva; KUZ'MIN, G.M., tekhnicheskij redaktor

[Photogrammetry] Fotogrammetriia. Moskva, Izd-vo geodezicheskoi
lit-ry, 1956. 335 p. (MIRA 10:3)
(Photogrammetry)

ZAITOV, ISMAIL RIZAUD DINOVIH
PHASE I BOOK EXPLOITATION

396

Kozhevnikov, Nikolay Petrovich, and Zaitov, Izmail Rizaiddinovich

Fotogrammetriya (Photogrammetry) Pt. 2. Moscow, Geodezizdat, 1957.
139 p. 4,000 copies printed.

Gen. Ed.: Lobanov, A.N., Doctor of Technical Sciences, Professor;
Tech. Ed.: Romanova, V.V.; Ed. of Publishing House: Vasil'yeva, V.I.

PURPOSE: This textbook is intended for students pursuing courses in
geodetic aerial photography at technical institutes. It is a
continuation of an earlier volume written by Professor
M. Aleksapol'skiy.

COVERAGE: The present volume (Part 2) describes photogrammetric con-
densation of basic maps by means of phototriangulation and photo-
traversing and analyzes the degree of accuracy of each technique.
It discusses the interpretation of details in aerial photographs
and topographic surveys achieved by combined air and ground

Card 1/7

Photogrammetry

396

methods. The program of the book was worked out by N.M. Aleksapol'skiy, Professor of the Moscow Institute of Geodetic, Aerophotogrammetric and Cartographic Engineers, and an Honored Worker in Science and Technology of the USSR. The book was written under his supervision and guidance. The first section of the present volume traces the history and development of photogrammetric methods and discusses the principles of central planning, the essence of air surveying, photographic analysis, the determination of the position of observed individual points in aerial photographs, the utilization of parts of a photograph for a map, and the transformation of aerial photographs. The second section describes methods of developing the topographic parts of a map, vertical control on the basis of aerial photographs, and surveying by combined aerial and ground methods. There are 20 references, all Soviet.

TABLE OF
CONTENTS:

Foreword

3

Card 2/7

Photogrammetry

396

Part 1. PHOTOTRIANGULATION AND PHOTOPOLYGOI IOMETRY.

Ch. I. Plane Phototriangulation

- | | |
|---|----|
| 1. Principles of phototriangulation and photopolygoniometry | 5 |
| 2. Graphic plotting of phototriangulation traverses for a single traverse | 7 |
| 3. Constructing loops for two traverses | 12 |

Ch. II. Reducing Phototriangulation Loops

- | | |
|--|----|
| 4. Optical reduction | 16 |
| 5. N.A. Popov's projector | 16 |
| 6. Professor F.V. Drobyshev's epiprojector | 21 |
| 7. Other projection methods | 24 |

Ch. III. Errors in Constructing Rhombic Loops

- | | |
|---|----|
| 8. Errors occurring in the construction of rhombic loops and in orientation | 25 |
| 9. Errors in plotting rhombs | 27 |

Card 3/7

Photogrammetry

396

- | | |
|---|----|
| 10. Accumulation of errors in a loop | 32 |
| 11. Accuracy of rhombic loops in phototriangulation | 42 |
| 12. Effect of tilt in aerial photographs on loop distortion in phototriangulation | 44 |

Ch. IV. Phototriangulation Networks

- | | |
|--|----|
| 13. Plotting phototriangulation nets by ground geodetic control points | 50 |
| 14. Tying in grids by means of cross-traverses | 54 |
| 15. Construction of an independent net | 55 |

Ch. V. Increasing Accuracy in Plane Triangulation

- | | |
|---|----|
| 16. General principles | 58 |
| 17. Stereoscopic devices for plane triangulation | 61 |
| 18. Analytical method of tracing phototriangulation loops | 66 |
| 19. Utilization of surplus data in building loops | 68 |
| 20. Building loops in a considerably accentuated area | 70 |

Card 4/7

396

Photogrammetry

Ch. VI. Photopolygonometry

- | | |
|---|----|
| 21. Principles for constructing photopolygonometric traverses | 73 |
| 22. Use of radio altimeters in photopolygonometry | 75 |
| 23. Methods of plotting traverses | 77 |
| 24. Measuring basis lines and the angles between them | 78 |
| 25. Computing traverse coordinates | 83 |
| 26. Traverse plotting and the intersection of base and orientation points | 85 |
| 27. Plotting and adjusting grids | 85 |
| 28. Peculiarities in plotting traverses in photopolygonometry | 87 |
| 29. Accuracy in photopolygonometry | 89 |

Part 2.

Ch. VII. Aerial Photographic Contouring

- | | |
|-------------------------|----|
| 30. Aerial photosurveys | 97 |
|-------------------------|----|

Card 5/7

Photogrammetry

396

- | | |
|--------------------------------|-----|
| 31. Geodetic operations | 100 |
| 32. Photogrammetric operations | 106 |

Ch. VIII. Interpretation

- | | |
|---|-----|
| 33. General principles of interpreting | 113 |
| 34. Interpreting populated areas in rural districts | 117 |
| 35. Interpreting a hydrographic grid | 119 |
| 36. Interpreting a road grid | 120 |
| 37. Interpreting vegetation cover and agricultural lands | 121 |
| 38. Organization of work and techniques in interpretation | 122 |

Ch. IX. Using Aerial Photographic Material To Bring Maps Up To Date

- | | |
|---|-----|
| 39. General information on the obsolescence of maps | 126 |
| 40. Methods of bringing maps up to date | 127 |

Card 6/7

Photogrammetry

396

41. Contour surveying and interpreting in the photographic plane 130
42. Contour surveying with the use of improved photo-schemes and separate nontransformed aerial photographs 133

Bibliography

138

AVAILABLE: Library of Congress

Card 7/7

MM/ad
8-21-58

ZAITOV, I.R.

ZAITOV, I.R.; INDICHENKO, I.G.

Stereoscopic cameras for measuring purposes. Zhur. nauch. i prikl.
fot. 1 kin. 2 no.3:212-218 Ky-Je '57. (MIRA 10:6)
(Photogrammetry)

ZAITOV, I.R.

ZAITOV, I.R.; ZABIROV, R.D.; KNIZHNIKOV, Yu.F.; BRYUKHANOV, A.V.

Large-scale phototheodolite surveying of Tien Shan glaciers in
1955. Vest. Mosk. un. Ser. biol., pochv., geol., geog. 12 no.1:
229-235 '57. (MLBA 10:11)

1. Kafedra kartografii Moskovskogo gosudarstvennogo universiteta.
(Tien Shan--Glaciers) (Photographic surveying)

ZAITOV, I.R.; ZBIROV, R.D.; KNIZHNIKOV, Yu.F.

Use of stereophotogrammetric surveying to compile a large-scale
geomorphological map of special designation. Vest.Mosk.un.Ser.
biol., pochv., geol., geog. 12 no.2:213-222 '57. (MIRA 10:10)

1. Kafedra kartografii Moskovskogo universiteta.
(Photographic surveying)
(Cartography)

SOV/154-58-1-B/22

AUTHORS:

~~Zaitov, I. B.~~ Candidate of Technical Sciences, Indichenko.
I. G., Engineer

TITLE:

The Spectral Reflectance of Some Types of Soil (O spektral'-
noy otrazhatel'noy sposobnosti nekotorykh tipov pochv)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aero-
fotos"yemka, 1958, Nr 1, pp 57-64 (USSR)

ABSTRACT:

The photographic qualities of air photographs depend on the accuracy of the photogrammetric measurements. In perfecting the photographic qualities of air photographs, however, the optical properties of the objects to be photographed are highly important. The first tests in this field (in particular, as to recognizing the spectral reflectance of the soil) were carried out by G. A. Tikhov, Corresponding Member, Academy of Sciences, USSR. Later on they were continued by Ye. L. Krinov. The reflectance of solid wooded areas was investigated by A. K. Pronin. In 1955 and 1956 the investigations were continued systematically by the Laboratoriya aerofotometodov kafedry kartografii MGU (Laboratory of Aerophotographic Methods, Department of Cartography, Moscow State University).

Card 1/2

The Spectral Reflectance of Some Types of Soil

SOV/154-58-1-8/22

These tests were performed by means of reflector monochrometer (Type 3MP-2). The results of the tests were reproduced in a diagram. It was discovered that all terrains tested (ground sections) have a comparatively low reflection coefficient. The reflectance largely depends on the respective surface character of the soil, also soil humidity exercising an essential influence on the soil reflectance, which could be observed with certainty in the test. Dry soil reflects twice as much as humid soil, although the diagrams do not show any remarkable change in this case. There are 15 figures.

ASSOCIATION: Moskovskiy Gosudarstvennyy universitet imeni M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

Card 2/2

BRYUKHANOV, A.V.; ZAITOV, I.R.; LAPPO, I.A.

Contents and symbols of large-scale glacier maps. Inform. sber. o
rab. Geog. fak. Mosk. gos un po Mezhdunar. geofiz. gedu no.1:111-123
'58. (MIRA 12:3)

(Glaciers--Maps)

SOV/154-58-3-10/24

AUTHORS: Zaitov, I. R., Docent, Candidate of Technical Sciences,
Tamitskiy, E. D., Engineer

TITLE: On the Problem of the Quantitative Photometric Interpretation
of the Discriminative Properties of Spectrozonal and Color
Material for Aerial Photography (K voprosu o kolichestvennoy
fotometrcheskoy otsenke deshifrovochnykh svoystv
spektrozonal'nykh i tsvetnykh aerofotomaterialov)

PERIODICAL: Izvestiya vyschikh uchebnykh zavedeniy. Geodeziya i
aerofotos"yemka, 1958, Nr 3, pp 95-98 (USSR)

ABSTRACT: This is a presentation of a new method of increasing the accu-
racy in estimating the discriminative properties of various
types of photographic color materials. The procedure is as
follows: A negative is assumed to incorporate features of three
different types of timber, for example fir, birch, and oak
trees. The photoelectric photometer measures the density D of
the features of all three types of timber. Averaged densities
are obtained from measuring 100 specimens of each type of tim-
ber. They are plotted in a diagram. The distribution of the
points along the coordinate axis permits to determine to what

Card 1/3

SOV/154-58-3-10/24

On the Problem of the Quantitative Photometric Interpretation of the Discriminative Properties of Spectrozoal and Color Material for Aerial Photography

degree the densities of the images of one group of objects differs from another. This method is most effective in estimating the discriminative properties of two-layer color photographic materials. The density of each layer can be measured at any point of the negative. In three-layer negatives the method of quantitative estimation is complicated by the necessity of establishing a three-coordinate frame of reference. In this case the color shade of the negative can be determined according to the international system of color coordinates XYZ with the aid of a visual colorimeter. The ranges of straying are entered into the standardized color diagram. The advantage offered by this method is self-evident in particular with two-layer negatives which are also referred to as spectrozoal negatives. The method was successfully tested in the Laboratory of Aerial Photography Methods of the Chair of Cartography at the MGU. There are 4 figures and 1 reference, 1 of which is Soviet.

Card 2/3

On the Problem of the Quantitative Photometric Interpretation of the Discriminative Properties of Spectrozoal and Color Material for Aerial Photography

SOV/154-56-3-10/24

ASSOCIATION: Moskovskiy ordena Lenina i ordena Trudovogo Krasnogo Znameni Gosudarstvennyy universitet im. M. V. Lomonosova (Moscow Lenin Order and Order of the Red Labor Banner State University ineni M. V. Lomonosov)

SUBMITTED: December 3, 1957

Card 3/3

Zaitov, I.R.

98-52-4-13/18

AUTHORS:

Zaitov, I.R., Candidate of Technical Sciences; Indichenko, I.G. and Knizhnikov, Yu.F., Engineers

TITLE:

Using Phototheodolites for Obtaining Plans of the Water Surface in the Spanning of the Angara River (Primeneniye fototeodolita dlya polucheniya planov vodnoy poverkhnosti pri perekrytii r. Angary)

PERIODICAL:

Gidrotekhnicheskoye Stroitel'stvo, 1958, Nr 4, pp 49-51

ABSTRACT:

The photogrammetric method is being increasingly applied in the investigation of wave formations on seas, lakes and reservoirs. In many cases this method appears to be the only one for registering and measuring the wave relief; this method is also used for investigating the form of the free water surface over the embankment of a river dam. Such was the case in 1956 at the construction of the Irkutsk Hydroelectric Power Plant, when photogrammetry was applied with a view to obtaining plans of the water surface below the pontoon bridge across the Angara river. The stereo-photography of a water surface of 10 x 150 sq meters was carried out with two phototheodolites "FTN" with an electrically-synchronized shutter-release device; panchromatic photo plates with 100 units (Cost) sensitivity were used, making a total of 18 photos. Each stereo couple was

Card 1/2

98-58-4-13/18

Using Phototheodolites for Obtaining Plans of the Water Surface in the
Spanning of the Angara River

divided into three sections - the first consisting of small waves and surf, the second - of crests and hollows of stable waves. The photogrammetric plotting of the perspective model of the water surface in the orthogonal plan at a scale 1:300 was done on the large stereo-autograph of Zeiss. Figure 3 shows one of these plans and Figure 4 - the corresponding phototheodolite picture. To avoid blurred photos it is advisable to use a shutter speed of not less than 1/25 sec. Dead angles can be avoided by taking stereo-photos from two basic points with 4 phototheodolites which must be equipped with synchronized shutter release devices. There are 4 figures.

AVAILABLE: Library of Congress

Card 2/2 1. Phototheodolites-Applications 2. Water waves-Analysis

3(4), 25(1)

SOV/154-59-5-13/17

AUTHORS:

Zaitov, I. P., Docent, Candidate of Technical Sciences,
Indichenko, I. G., Engineer

TITLE:

A Method Used to Determine the Conjugated Focal Length and the
✓ Photogrammetric Distortion of Measuring Cameras Intended for
Close-ups

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i
aerofotos"yemka, 1959, Nr 5, pp 145-148 (USSR) ✓

ABSTRACT:

Since there are only goniometers available for the focusing of
a phototheodolite for infinity, the development of a device
with adjustable focal length proved to be necessary for close-
ups. The authors report on the development of such a device by
the Laboratoriya aerofotometodov kafedry geodezii i kartografii
Moskovskogo Gosudarstvennogo Universiteta im. M. V. Lomonosova
(Laboratory for Methods of Aerial Survey of the Chair of
Geodesy and Cartography of Moscow State University imeni M. V.
Lomonosov). These devices ✓ allow to determine the focal length
and the photogrammetric distortion of the camera when photo-
graphing objects at a distance of 1 m up to infinity. Its
principal parts are collimator 1, focused for infinity, a

Card 1/2

SOV/154-59-5-13/17
A Method Used to Determine the Conjugated Focal Length and the Photogrammetric Distortion of Measuring Cameras Intended for Close-ups

goniometer used to level the instrument to be adjusted, and collimator 3 with variable focusing. These instruments are mounted on an OS-2-type optical bench (Figs 1-4). The total device is adjusted by the usual optical methods. Experiments proved its applicability. There are 4 figures. ✓

ASSOCIATION: Moskovskiy ordena Lenina i ordena Trudovogo Krasnogo Znameni Gosudarstvennyy Universitet im. M. V. Lomonosova (Moscow Order of Lenin and Order of Red Banner State University imeni M. V. Lomonosov)

SUBMITTED: October 30, 1958

Card 2/2

ZAITOV, I.R.

Transactions of the Laboratory (Geod.) of Aeromethods, AS USSR ^{80V/3815}

V.7, Materials of 7th All Interdept Conf. Aerial Survey (Dec 56), Moscow, 1959, 331pp.

Zaitov, I.R. [Moscow State University imeni M.V. Lomonosov].

Organization of the Soviet Photogrammetric Society
(Short Synopsis of the Report)

327

AVAILABLE: Library of Congress

Card 15/15

AC/dmr/mis
8-1-60

ZAITOV, I.R.

Transactions of the Laboratory (Cont.) of Aeromethods, 80V/5815 A3 USSR
 V.I. Materials of 7th AU Interdept Conf. Aerial Survey (Dec 56), Moscow, 1959, 331pp.
 Drobyshev, F.V. [Moscow Institute of Geodetic, Photogrammetric
 and Cartographic Engineering].
 Stereoscopic Plotting of Intersections [Plane Diagrams of
 Space Intersections] 127

Sokolovskaya, Ye.I. [Vsesoyuznyy topographo-marksheyderskiy trest
 (Soyuzmarkshtrest) - All-Union Topographic Surveying Trust].
 Stereotopographic Mapping at a 1:2000 Scale 131

Sventsitskiy, S.A. [Tashkentskiy institut inzhenerov irrigatsii i
 mekhanizatsii sel'skogo khozyaystva - Tashkent Institute of Agricultural
 Irrigation and Mechanization Engineering].
 Complex [Integrated] Large-Scale Mapping of Small Areas 135

Zaitov, I.R. [Moskovskiy gosudarstvennyy universitet imeni
 M.V. Lomonosova - Moscow State University imeni M.V. Lomonosov].
 Stereoscopic Cameras for Measurements 139

Finkovskiy, V.Ya. [Novosibirskiy institut inzhenerov geodezii,
 aerofotos'yemki i kartografii - Novosibirsk Institute of Geodetic,
 Photogrammetric, and Cartographic Engineering].
 The Theory of the Stereocomparagraph 147

Card 6/15

ZABIROV, Rashid Dzhambaliyevich, kand. tekhn. nauk; KNIZHNIKOV, Yuriy Firsovich, inzh.; ZAITOV, I.R., kand. tekhn. nauk, otv. red.; REVINA, Ye.A., red. izd-va; ANOKHINA, M.G., tekhn. red.

[Phototheodolite surveying of the Tien Shan glaciers during the I.C.Y.] Fototeodolitnaia s"emka lednikov Tian-Shania v period MGG. Frunze, Izd-vo Akad.nauk Kirgizskoi SSR, 1962. (MIRA 15:9) 99 p.

1. Direktor Tyan-Shan'skoy fiziko-geograficheskoy stantsii (for Zabiroy). 2. Laboratoriya aerofotometodov Moskovskogo gosudarstvennogo universiteta (for Knizhnikov). 3. Zaveduyushchiy laboratoriyey aerofotometodov Moskovskogo gosudarstvennogo universiteta (for Zaitov).
(Tien Shan--Glaciers)

KISLOV, V.V.; ZAITOV, I.R.; LOBANOV, A.N., doktor tekhn. nauk,
retsenzent; LEVCHUK, G.P., kand. tekhn. nauk, dots.,
retsenzent; BORDYUKOV, M.P., kand. tekhn. nauk, dots.,
retsenzent; OVSIANNIKOV, R.I., kand. tekhn. nauk, dots.,
retsenzent; KO'YLOV, V.N., kand. tekhn. nauk, dots.,
retsenzent; BIR, N.Ya., doktor tekhn. nauk, prof.,
red.

[Practical work in photogrammetry] Praktikum po foto-
grammetrii. Moskva, Nedra, 1965. 187 p.

(MIRA 18:6)

ЗАЙТОВ, И.Р., dotsent, kand.tekhn.nauk; ИДИЧЕНКО, И.Г., inzh.

Apparatus for determining the conjugate focal distance and
photogrammetric distortion of measuring cameras used in the
photography of near objects. Izv.vys.ucheb.zav.; geod.i
aerof. no.5:145-148 '59. (MIRA 13:3)

1. Moskovskiy ordena Lenina i ordena Trudovogo Krasnogo
Znaneni Gosudarstvennyy universitet im. M.V.Lomonosova.
(Aerial photogrammetry)

ZAITOV, I.R.

Stereoscopic cameras for measuring purposes. Trudy Lab.aeromet.
7:139-146 '59. (MIRA 13:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Photogrammetry--Equipment and supplies)
(Cameras)

S/035/62/000/007/062/033
AC01/A101

AUTHOR:

Zaitov, I. R.

TITLE:

Works of the laboratory for aerophotomethods at the Department of
Geodesy and Cartography of the Geographic Faculty of the Moscow
State University during the International Geophysical Year

PERIODICAL:

Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962, 2,
abstract 703 ("Inform. sb. o rabotakh Geogr. fak. Mosk. un-ta po
Mezhdunar. geofiz. godu", 1961, no. 7, 5 - 13)

TEXT:

During IGY were conducted explorations of mountainous glaciers on
the Caucasus, in the El'brus region, and on the Middle Tian Shan, south and south-
east of the Issyk-Kul' lake. A phototheodolite survey was carried out and large-
scale maps of glaciers were compiled to record the space position of the glaciers.
Geodetic control network for surveying; individual glaciers was developed in the
form of free systems. Altitudes of photostations were determined from the maps
or with an aneroid. When continuous surveys were started on the Caucasus, the
geodetic network of the entire El'brus region was reduced into a unified system. ✓

Card 1/3

S/035/62/000/007/062/083
A001/A101

Works of the laboratory for...

A ФТН (FTN) phototheodolite was employed in surveys; the size of photograph was 13 x 18 cm and the main distance was 193 mm. A ТБ-1 (TB-1) optical theodolite was added to the instrument set for accomplishing geodetic operations. A twin stereophotogrammetric CKM-4 (SKI-4) camera was used for studying salt flowage processes, adjusted for surveying closely located objects. A conventional 35-mm wide film was used for filming. To determine glacier positions, phototheodolite survey was repeated annually during IGY. In 1957 an aerophotosurvey in the region of El'brus glaciation was performed. Aerial photographing was made from a jet aircraft and an altitude of 9,000 m with an aerial camera with $f_k = 200$ mm and photograph size 30 x 30 cm. Two types of aerial films were used: panchromatic and three-layer color, ЦН-1 (TsN-1), which makes it possible to obtain positive colored images of objects close to the natural color. In the process of glaciological studies, contact imprints from both types of film were used, as well as photodiagrams assembled from the photographs rectified by zones on a ФТБ (FTB) rectifier. Rectification was made by points taken from a topographic map. Studies on deciphering phototheodolite photographs were accomplished, as applied to compiling glacier maps. Deciphering properties of conventional black-and-white and color aerial photographs were compared under office and field conditions. It

Card 2/3

Works of the laboratory for...

3/035/62/000/007/062/083
A001/A101

has been established that application of color aerial photographs does not improve the possibility of singling out ice, firn and snow on photographs. The compiled maps of glaciers were compared with 1 : 20,000 maps for the Caucasus glacier region, compiled on the basis of data of the phototheodolite survey performed in 1911 by the German explorer Burmistr, which permitted determination of changes in the position of the glacier during 50 years. As a result of the work, the legend of large-scale glacier map was compiled, large-scale maps of glaciers of the Middle Tian-Shan and El'brus were compiled, and the album of large-scale maps of Tian-Shan glaciers was prepared; the atlas of maps of El'brus glaciers is being compiled.

I. Mityachkin

[Abstracter's note: Complete translation]

Card 3/3

ZAITOV, I.R.

Work of the laboratory of aerial photographic methods of
the Department of Geodesy and Cartography of the Geography
Faculty of the Moscow State University during the International
Geophysical Year. Inform.sbor. o rab. Geog. fak. Mosk. gos.,
un. po Mezhdunar. geofiz. godu no.7:5-13 '61. (MIRA 15:11)
(Glaciers)
(Aerial photogrammetry)

MAKKAVEYEV, N.I., prof.; KIMELEVA, N.V.; ZAITOV, I.R.; LEBEDEVA, N.V.;
MEDVEDEV, V.S.; LAZAREVA, L.V., tekhn. red.

[Experimental geomorphology] Eksperimental'naya geomorfologiya.
By N.I.Makkaveev i dr. Moskva, Izd-vo Mosk. univ., 1961. 193 p.
(MIRA 15:1)

(Geological research)

L 28005-66 EWT(1) RO

ACC NR: AP6018194

SOURCE CODE: UR/0242/65/000/004/0003/047

AUTHOR: Smatanin, N. I.; Zairov, K. S.; Akhmedzhanov, K. A.

ORG: None

TITLE: Certain questions concerning sanitary and hygienic evaluation of the use of poisonous chemicals in Uzbekistan

SOURCE: Meditsinskiy zhurnal Uzbekistana, no. 4, 1965, 3-7

TOPIC TAGS: toxicology, experiment animal, agriculture science

ABSTRACT: The authors classify the poisonous chemicals used in agriculture, particularly on cotton, in Uzbekistan into the four groups established by the Ukrainian Institute of Labor Hygiene and Occupational Diseases, on the basis of tests with laboratory animals. Group I with an LD₅₀ of less than 50 mg per kg; group II with an LD₅₀ of 50-100 mg per kg; group III with an LD₅₀ of 100-1000 mg per kg; and group IV with an LD₅₀ over 1000 mg per kg. The authors apply the recommendations of Obornik (Official Materials) (Collection of Official Materials). Groups I should not be allowed in production research, since these chemicals cannot be used in agriculture; group II should be used only in experiments under the strictest precautions. The authors give a table of 20 agricultural chemicals used in Uzbekistan, listing the use, dose for prophylactic tests, skin permeability and lethal dose, accumulative dose, and other data. They conclude that the chemicals used in agriculture should be handled with less dangerous substances. Orig. art. has: 1 table. 10 refs.

SUB CODE: 06, 02 / SUBM DATE: 25May64

Card 1/1 *plw*

L 07231-67 FSS-2/EWT(1) IJP(6) JGS/GD/GM

ACC NR: AT6026453

SOURCE CODE: UR/0000/66/000/000/0146/0149

AUTHOR: Zaitov, I. R.

ORG: none

90

54
53
34

TITLE: Activities of the laboratory of aerial photographic methods of the Geographic Faculty, Moscow University, connected with the interpretation of aerial photographs

SOURCE: AN SSSR. Mezhdudovedomstvennaya komissiya po aeros"yemke. Teoriya i praktika deshifirovaniya aerosnimkov (Interpretation of aerial photographs in theory and practice). Moscow, Izd-vo Nauka, 1966, 146-149

TOPIC TAGS: aerial photography, optic scanning, geophysic research facility, geographic research facility, geographic survey, aerial survey, photo interpretation

ABSTRACT: The basic task of the scientific research laboratory of aerial photographic methods of the Department of Geodesy and Cartography of Moscow University (nauchno-issledovatel'skaya laboratoriya aerofotometodov kafedry geodezii i kartografii Moskovskogo universiteta) is the extension of the region of applicability of aerial photography methods in geological and geographic surveying of territories and the increase in efficiency of such methods. The operation of the laboratory follows two main directions: 1) the study of problems of immediate practical importance (e.g., investigation of the Ryazan Oblast' in conjunction with the plans of the III Inter-

Card 1/2

L 07231-67

ACC NR: AT6026453

national Geophysical Year); and 2) activities more intimately connected with the interpretation problems (e.g., determination of aerial photos most suitable for large scale geological mapping and the search for useful minerals). The paper contains more detailed information concerning the various aspects of the activities discussed (regions of operation and equipment used).

SUB CODE: 14/ SUBM DATE: 21Jan66

08/

Card 2/2 *LC*

PESIN, N.Ya.; BRALIN, Zh.B.; ALOTIN, L.M.; ZAITOV, M.A.; GERT, A.P.

Analysis of the degree of difficulty in underground haulage
operations in Karaganda Basin mines. Nauch. trudy KNIUI no.14:
480-496 '64. (MIRA 18:4)

L 11393-67 EWT(1)/EWT(m)/ENP(t)/ETI IJP(c) JD/JG/GG
 ACC NR: AF7000391 SOURCE CODE: UR/0386/66/004/009/0338/0341

AUTHOR: Zaitov, M. M.; Shekun, L. Ya.

ORG: Kazan' State University im. V. I. Ul'yanov-Lenin (Kazanskiy gosudarstvennyy universitet)

TITLE: Effect of uniaxial compression on the paramagnetic resonance of Ni^{3+} in $CaWO_4$.

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 9, 1966, 338-341

TOPIC TAGS: electron paramagnetic resonance, neodymium, calcium compound, tungstate, pressure effect, line shift

ABSTRACT: The authors analyze first the effect of uniaxial pressure on the ordinary spin-Hamiltonian with effective spin $1/2$ and estimate the perturbation of the Hamiltonian brought about by this pressure change. The results are compared with the shifts of EPR line of Nd^{3+} in $CaWO_4$ under the influence of uniaxial pressure, measured relative to the line position at a certain initial pressure. The measurement results yield three linear combinations of the components of the tensor representing the compression effect, the estimated value of which is $G \sim 10^{-20}$ erg/Gauss. Even this preliminary estimate leads to a few interesting conclusions, since the direct coupling of the Nd^{3+} ion to the $CaWO_4$ lattice turns out to be unexpectedly small and, most curiously, smaller than that obtained for Co^{2+} in MgO (E. B. Tucker, Phys. Rev. v. 143, 264, 1966). This contradicts the current opinion that rare-earth ions are

Card 1/2

L 11393-67

ACC NR: AP7000391

more strongly coupled dynamically to the lattice than the iron-group ions. Orig. art.
has: 9 formulas.

SUB CODE: 20/ SUBM DATE: 18Jul66/ ORIG REF: 004/ OTH REF: 005

Card 2/2 orgk

ZAITOV, M.M.

Volunteer design offices in Leninogorsk. Neftianik 7 no. 7:3-5 J1 '62.
(MIRA 16.3)

1. Predsedatel' Soveta obshchestvennykh konstruktorskikh byuro
neftepromyslovogo upravleniya Leninogorskneft'.
(Leninogorsk (Tatar A.S.S.R.)—Oil fields—Equipment and supplies)

KABARDIN, Gennadiy Aleksandrovich; ZAITOV, Marat Mansurovich;
LATUKHINA, Ye.I., ved.red.; POLOSINA, A.S., tekhn. red.

[Using a single pipe for gathering oil and gas] Odnotrubnyi sbor produktsii skvazhin. Moskva, Gostoptekhizdat, 1963. 83 p. (MIRA 16:10)

(Petroleum--Transportation)
(Gas, Natural--Transportation)

ADEL'SON, S.V.; ZAITOVA, A.Ya.

Calculating the oxidation of coke on a catalyst. Trudy
BashNII NP no.6:49-63 '63. (MIRA 17:5)

L 13292-66 EWT(m)/EWP(j) RM

ACC NR: AP6000325

(A)

SOURCE CODE: UR/0286/65/000/021/0012/0012

INVENTOR: Volkova, L. I.; Zaitova, A. Ya.; Ioakimis, A. A.; Mochal'nikova, T. P.;
Nazarova, L. Yu.; Nazarov, V. I.; Pryakhina, M. S.; Petrov, V. N.; Rachkovskiy, E.
E.; Savel'yev, A. P.; Syrova, A. A.; Tikhonovskaya, S. G.

ORG: none

32
B

7.44.55
 TITLE: A method for producing normal butanol by synthesis from ethyl alcohol.
 Class 12, No. 175929 [announced by the Bashkir Scientific Research Institute for
 Petroleum Refining (Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke
 nefti)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 12

TOPIC TAGS: catalysis, butanol, ethyl alcohol

ABSTRACT: This Author's Certificate introduces: 1. A method for producing normal
 butanol by synthesis from ethyl alcohol on a catalyst. The process is done in a
 single stage by using a catalyst consisting of aluminum oxide, magnesium oxide,
 silicon oxide and a salt or oxide of an alkali metal. 2. A modification of this

Card 1/2

UDC: 66.097.3 : 547.264.07

L 13292-66

ACC NR: AP6000325

method in which the catalyst contains from 5 to 80 % aluminum oxide, from 95 to 10 % magnesium oxide, from 0 to 50 % silicon oxide and from 0 to 5 % of a salt or oxide of an alkali metal.

SUB CODE: 07/ SUBM DATE: 11Apr63/ ORIG REF: 000/ OTH REF: 000

jw
Card 2/2

MASAGUTOV, R.M.; DANILOVA, R.A.; ZAITOVA, A.Ya.; GILYAZEV, N.G.;
ZAGRYATSKAYA, L.M.; BUGAY, Ye.O.; PRIYAKHINA, K.F.

High-temperature catalytic cracking of heavy fractions of
straight-run gasoline. Trudy BashNII NP no.6:14-18 '63.
(MIRA 17:5)

ADEL'SON, S.V.; ZAITOVA, A. Ya.

Kinetic calculation of the regenerator of a catalytic cracking
unit on a bead catalyst. Khim. i tekhn. topl. i masel 9 no.5:
48-52 5 My'64 (MIRA 17:7)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut nefte-
khimicheskoy i gazovoy promyshlennosti imeni akademika Gubkina
i Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke
nefti.

ZAITOVA, A.Ya.; MASAGUTOV, R.M.; VOL'FSON, I.S.; KIRILLOV, T.S.; DOBREYKIN,
V.Ye.

Purifying the reflux of units for thermal cracking on an aluminosilicate catalyst. Trudy Bash NIINP no.5:56-68 '62.

(MIRA 17:10)

ADEL'SON, S.V.; ZAITOVA, A.Ya.

Effect of the specific consumption of air on the kinetics of
the oxidative regeneration of a cracking catalyst. Khim. i
tekh. topl. i masel 8 no.4:16-20 Ap '63. (MIRA 16:6)

(Cracking process) (Oxidation)
(Aluminosilicates)

BYGENSEN, A.S.; ADEL'SON, S.V.; MASAGUTOV, R.M.; ZAITOVA, A.Ya.

Admissible residual coke content during catalytic cracking.
Trudy BashNII HP no.1:145-155 '59. (MIRA 12:6)
(Cracking process) (Catalysts) (Coke)

MASAGUTOV, R.M.; SHESTAKOVA, N.M.; MIKHAYLOVA, M.G.; GILYAEV, N.G.;
ZAITOVA, A.Ya.; VOLKOVA, L.I.

Effect of the firing temperature of a catalyst during preparation
on its mechanical strength. Trudy Bash NII NP no.3:166-170. '60.
(MIRA 14:4)

(Catalysts) (Cracking process)

ADEL'SON, S.V.; ZAITOVA, A.Ya.

Effect of the granulometric composition of catalyst on
its regeneration rate. Khim. i tekhn. topl. i masel 8 no.9:
20-23 8 '63. (MIRA 16:11)

1. Moskovskiy institut neftekhimicheskoy i gazovoy
promyshlennosti im. akad. Gubkina i Bashkirskiy neftyanoy
nauchno-issledovatel'skiy institut.

MASAGUTOV, R.M.; SHESTAKOVA, N.M.; MIKHAYLOVA, M.G.; GILYAZEV, N.G.;
ZAITOVA, A.Ia.; VOLKOVA, L.I.

Effect of temperature during calcination on the mechanical
strength of catalysts. Khim. i tekhn. topl. i masel 4 no.1:
69-71 Ja '59. (MIRA 12:1)

1. Bashkirskiy nauchno-issledovatel'skiy institut neftyanoy
promyshlennosti.

(Catalysts)

EYGENSON, A.S.; MASAGUTOV, R.M.; ZAITOVA, A. Ya.; VOLKOVA, L.I.; BERG, G.A.;
YEFIGIMOVA, A.K.

Effect of some physicochemical properties of raw stock on
catalytic cracking indices. Trudy. Bash NII NP no.3:19-32
'60. (MIRA 14:4)

(Cracking process)

ADEL'SON, S.V.; ZAITOVA, A. Ya.

Kinetics of the regeneration of spherical aluminosilicate
catalysts. Trudy Bash NII NP no.3:171-180 '60. (MIRA 14:4)
(Aluminosilicates)

ZAITS, L.P.; SAPOZHNIKOVA, O.V.

Tuberculosis as a cause of disability among Sverdlovsk
workers in 1956-1960. Probl.tub. no.7:7-11 '62. (MIRA 15:12)

1. Iz Sverdlovskogo nauchno-issledovatel'skogo instituta
tuberkuleza (dir. - prof. I.A.Shakleia) i Gorodskoy vrachebno-
trudovoy ekspertnoy komissii po tuberkulezu Sverdlovsk
(predsedatel' O.V.Sapozhnikova).
(TUBERCULOSIS) (SVERDLOVSK-DISABILITY EVALUATION)

ZAITS, L.P. (Sverdlovsk)

Lung cancer and other causes of death connected with smoking.
Feb'd. 1 akush. 24 no.5:50 Ky '59. (MIRA 12:8)
(LUNGS--CANCER) (TOBACCO--PHYSIOLOGICAL EFFECT)

ZAITS, L.P. (Sverdlovsk)

Alcoholism and its consequences. Vol'd. 1 akush. 25 no.1:46-52

Ja '60.

(MIRA 13:4)

(ALCOHOLISM)

LIBERMAN, I.N.; ZAITIS, L.P.; SAPOZHNIKOVA, O.V.

Decreased tuberculosis disability among the inhabitants of
Sverdlovsk. Probl.tub. 38 no.4:19-25 '60. (MIRA 14:5)
(SVERDLOVSK—TUBERCULOSIS)

GOLYANSKIY, SH.TS., inzh.; KRIVUSHA, V.P., inzh.; ZAITS, O.F., inzh.

Improvement of the MGD-2 magnetic fault detecting scope.
Energetik 9 no.4:19-20 Ap '61. (MIRA 14:8)
(Pipe—Testing) (Magnetic instruments)

ZAITSEV, B.Ye.; SHEYNKER, Yu.N.; KORESHKOV, Yu.D.

Infrared spectra and structure of some nonbenzoid aromatic compounds.
Dokl. AN SSSR 136 no.5:1090-1092 P '61. (MIRA 14:5)

1. Institut khimii prirodnikh soedineniy AN SSSR. Predstavleno
akad. M.M.Shemyakinym.
(Aromatic compounds—Spectra) (Carbonyl group)

ZAITSEV, G.P. (Moskva, ul. Chaykovskogo, d.7/1, kv.4); Yukhtin, V.I.
(Moskva, G-48, Komsomol'skiy prospekt, 36, kv.35)

Problems in the surgical treatment of cancer of the large
intestine. Vop. onk. 10 no.2:61-67 '64. (MIRA 17:7)

1. Iz kliniki obshchey khirurgii pediatricheskogo fakul'teta
(zav. - zasluzhennyy deyatel' nauki prof. G.P. Zaytsev) 2-go
Moskovskogo meditsinskogo instituta imeni N.I. Pirogova.

ZAITSEV, G.P.

Ninetieth anniversary of the birth of Academician S.I. Spasokukotskii.
Khirurgiia 36 no.11:147-148 N '60. (MIRA 13:12)
(SPASOKUKOTSKII, SERGEI IVANOVICH, 1870-1943)

ZAITSSEV, V., kand.med.nauk (Saransk).

Problems of renal pathology at the Twelfth All-Union Therapeutic Conference held at Erivan on October 5-7, 1960. V.Zaitsev.
Kz. med. zhur. no.1:98-99 Ja-F'61 (MIRA 16:11)

21.00000, J.A., 1mzh.

Industry-wide all-Union conference on diesel manufacture, Switzerland
30 No. 7:75 JI '64. (MIRA 18:9)

ZAITSSEV, V.P.; MYASNIKOV, L.A.

A study of experimental atherosclerosis with the aid of labelled cholesterol — $^{14}\text{C}_4$. Cor vasa 5 no.2:114-119 '63.

1. Institute of Internal Medicine, Academy of Medical Sciences,
Moscow.

(ARTERIOSCLEROSIS)	(CHOLESTEROL)	(CARBON ISOTOPES)
(LIVER)	(ADRENAL GLANDS)	(BRAIN) (BIOCHEMISTRY)

Zaitseva, A.

Practical utilization of the gum and extractive Daurian-larch chips.
p. 223.

BIOLOGICHESKAIA NAUKA: SELSHOMU I LASNOMU. (Latvijas PSR Zinatnu Akademijs
Biologijas Zinatnu nodala) Riga, Latvia, No. 16, 1958. In Russian.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 8,
August, 1959.
Uncl.

39205

S/220/62/031/002/002/004

1018/1218

27.12.19

also 2906

AUTHOR:

Zaitseva, G. N. and Belozerskii, A. N.

TITLE:

The effect of X-radiation on the metabolism of free nucleotides and on the enzymes of nucleic acid metabolism of *Azotobacter agilis*

PERIODICAL: Mikrobiologiya, v. 31, no. 2, 1962, 209-215

TEXT: X-radiation caused an accumulation of free mononucleotides (in *A. agilis* 22II (22D)) mainly of nucleoside-monophosphates. The content of nucleoside-di, and particularly triphosphates greatly diminished. X-radiation inhibited oxidative phosphorylation and greatly suppressed the activity of nucleoside phosphokinase which catalyzes transphosphorylation of mononucleotides. X-radiation reduced the activity of polynucleotide phosphorylase, and activated ribonuclease and an appreciable drop in RNA content of irradiated *A. agilis* cells was noted. X-radiation also stimulated the activity of DNase which brought about a decrease in DNA content in the irradiated cells. Since X-radiation brought about an inhibition of nucleoside phosphokinase and other enzymes involved in nucleic acid synthesis and stimulates the activity of hydrolysing enzymes, the nucleases, the de novo synthesis of nucleic acids was retarded or altogether arrested. Nucleic acids present in the cells prior to irradiation undergo decomposition. It has also been shown that X-radiation directly affects high-molecular polynucleotides.

Card 1/2

ZAITSOVA, G.N.; BELOZERSKIY, A.N.; NOVOZHILOVA, L.P.

Studying phosphorus compounds in developing *Azotobacter vinelandii*
by the use of D32. *Biokhimiia* 25 no.2:198-210 Mr-Apr '60.
(MIRA 14:5)

1. Biologo-pochvennyy fakul'tet Gosudarstvennogo universiteta im.
M.V.Lomonosova, Moskva.
(AZOTOBACTER) (PHOSPHORUS METABOLISM)

ZAITSEVA, M. G.

I-3

USSR/Plant Physiology - Mineral Nutrition.

Abs Jour : Ref Zhur - Biol., No 5, 1958, 19957

Author : Zaitseva, M.G.

Inst : Botanical Institute of the Academy of Sciences of the TadzhSSR.

Title : Study of the Processes of Nitrogen and Phosphorus Absorption by the Root-Systems of Pamir Plants in Connection with Temperature and Light Conditions of High Altitudes.

Orig Pub : Tr. In-ta botan. AN TadzhSSR, 1956, 47, 3-63.

Abstract : The absorption of N and P by barley, which was brought in from hot low- altitude regions of Central Asia was studied in the Pamir biological station in the years of 1951-1953. The experiments were carried out in a water culture on a Helrighel mixture under full illumination, under glass and under white cloth, also on plants which

Card 1/3

13

USSR/Plant Physiology - Mineral Nutrition.

I-3

Abs Jour : Ref Zhur - Biol., No 5, 1958, 19957

in both protected and unprotected plants was within the limits of experimental errors. The absorption of N and P by wildy growing plants (clinelimus, wormwood, astragal, red grass and others) from a phosphate buffer solution (pH 7) with KNO_3 was studied on roots cleared of the soil but attached to the plants. The absorbing mechanism of these plants was resistant to low temperatures: a -4 to -6 degree night temperature did not damage the living root endings of the clinelimus, astragal and reed grass, and nor mal absorption was restored in the morning hours. An assumption was made that the basis of periodicity of element absorption of mineral nutrition was due to the disparity in the rates of absorption of substances and their utilization in metabolism.

Card 3/3

14

ZAITSOVA, T.I.

Excretion of a neutral dye by gastric glands in various rates
of the secretory process. Vopr.fiziol. no.9:112-116 '54.
(MIRA 14:1)

1. L'vovskiy meditsinskiy institut, kafedra normal'noy fiziologii,
(GASTRIC JUICE,
secretion, determ. of secretion rate with
neutral dye)
(DYES,
determ. of gastric secretion rate)

ZAITSKY, V.F.; MYASNIKOV, L.A.; KASATKINA, L.V.; LOBOVA, N.M.; BUKASOVA, T.I.

The effect of ascorbic acid on experimental atherosclerosis.
Cor Vasa 6 no.1:19-25 '64.

1. Institute of Internal Medicine, Academy of Medical Sciences,
Moscow.

*